

Work Order ID 128963

Tuesday, January 27, 2015 7:55:26 AM

128963

Page 1

Item ID: D2611 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Bearing
 Start Date: 1/26/15 Start Qty: 50.00 ***50*** Cust Item ID:
 Required Date: 1/26/15 Req'd Qty: 50.00 ***50*** Customer:
 Reference:

Approvals: Process Plan: MCS Date: 1501-29 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2611	Rev C								

100 PURCHASING 0.00
100
 Purchasing Memo 0.00
 Purchasing Issue P/O: 2733 Purchase part as per Dwg D2611 Possible supplier:
 McMasterP/N: 63215K34 Material release note required
CK 15/02/03 50

110 Receive & Inspect for Damage & Mat'l Certs 0.00
110
 Packaging Memo 0.00
 Packaging Ensure certificate of conformity is attached
50x SP15-024

120 QC6- Inspect dimensions to drawing 0.00
120
 QC Memo 0.00
 Quality Control
(50) DAS 38 9-89

FEB 04 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Work Order ID 128963

128963

Page 2

Tuesday, January 27, 2015 7:55:26 AM

Item ID:	D2611	Accept	*N900040100*	Setup	Start	*NS1*
Revision ID:					Stop	*NS2*
Item Name:	Bearing					
Start Date:	1/26/15	Start Qty: 50.00	*50*	Cust Item ID:		
Required Date:	1/26/15	Req'd Qty: 50.00	*50*	Customer:		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <u>St 004</u>	0.00							
130									
Packaging	Memo	0.00				<u>50</u>	<u>DAS</u>	<u>06</u>	<u>FEB 15 2015</u>
Packaging									
140	QC21 - Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00				<u>MLJ</u>	<u>15-02-06</u>		
Quality Control									

MS-2-5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
--	--	---	--

Picklist Print

Tuesday, January 27, 2015 7:55:26 AM

Page 1

Work Order ID: 128963

128963

Parent Item: D2611

D2611

Parent Item Name: Bearing

Start Date: 1/26/15

Required Date: 1/26/15

Start Qty: 50.00

Required Qty: 50.00

Comments: IPP Rev:B99.06.23Re-formatDM
Change to SS; Change Supplier- Rev.C 07.03.14 EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

63215K34		Purchased		No			Each	0.0000		50			
63215K34									**				

Bearing

50x 8015-02-4.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

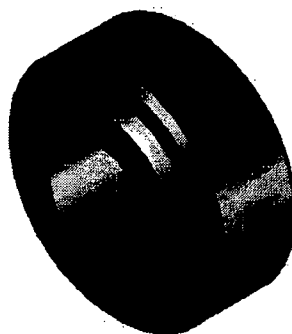
FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
--	--	---	--



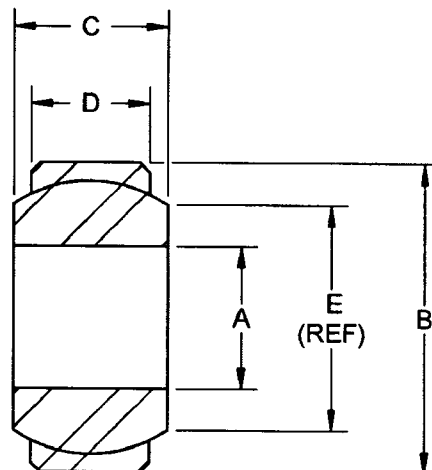
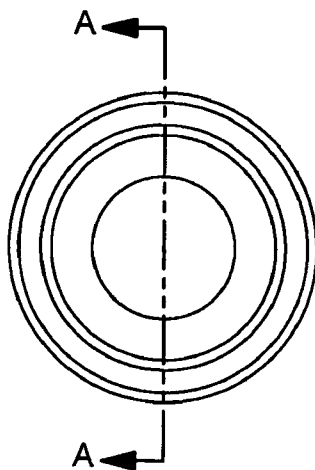
DESIGN <i>gp</i>	DRAWN BY <i>CB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D2611	REV. C SHEET 1 OF 1
DATE 06.09.20		TITLE BEARING	SCALE NTS
REV	DATE	DESCRIPTION	
A	97.07.31	NEW ISSUE	
B	01.07.04	RE-DRAWN	
C	06.09.20	CHANGE TO SS; CHANGE SUPPLIER	

SPECIFICATION CONTROL DRAWING



RELEASED

06.11.17 *#*



SECTION A-A

128963 MJS
15-01-29

100%
COPY
INT



A	B	C	D	E (REF)	POSSIBLE SUPPLIER
0.375	0.813	0.406	0.313	0.592	McMASTER-CARR P/N 63215K34

NOTES:

- 1) STAINLESS STEEL BALL JOINT SWIVEL BEARING
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

COPYRIGHT © 1997 BY DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO27313**

Purchase Order Date 2/3/2015

PO Print Date 2/3/2015

Page Number 1 of 5

Order From :

VU-MCM001

Ship To : DART AEROSPACE LTD

MCMaster-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 330 995 5500

Ship To Contact

Ship To Phone

Ship Via: Purolator ground ppd

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 10

Currency

USD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	95606A170 AS PER DWG D3631 REV. A B128910	Washer	2/5/2015 Yes 2/5/2015		100.00 Each	\$0.10	\$10.41
Line Total:							\$10.41
2	63215K34 AS PER DWG D2611 REV. C B128963	Bearing	2/5/2015 Yes 2/5/2015		50.00 ✓ Each	\$17.24	\$862.00
Line Total:							\$862.00
3	71725-45	8983T17 DRUM PLUG	2/5/2015 Yes 2/5/2015		10.00 Each	\$18.43	\$184.30

Note:

2/3/2015

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO27313
Order Placed By
Chantal Lavoie

Page 1 of 1
02/03/2015

McMaster-Carr Number
6758306-01

Line	Product	Ordered	Shipped
1	95606A170 Nylon Flat Washer, 7/16" Screw Size, 0.500" ID, 0.688" OD, Off-White, Packs of 100	1 Pack	1
2	63215K34 Stainless Steel Ball Joint Swivel Bearing, PTFE Lined, 3/8" ID, 13/16" OD, 13/32" Ball Thick	50 Each	50 ✓ SP15-02-4
3	8983T17 Drum Plug, 2" BSP, 316 Stainless Steel, Buna-N Gasket	10 Each	10
4	4719A438 Sanding Sleeve, Multipurpose, 180 Grit, 3/4" Inside Diameter, 1" Long, Packs of 25	6 Packs	6
5	4650A23 Rubber Drum for Sanding Sleeve, Shank, 3/4" Diameter, 1" Long	4 Each	4
7	2624A25 Drill Out Tap Remover, Seven Piece Set in Case	1 Set	1
8	92905A418 Alloy Steel Extended Point Set Screw, M10 X 1.5 Thread, 25MM Long, Packs of 25	1 Pack	1
9	8492A058 Press-Fit Drill Bushing with Head, 0.1875" (3/16") ID, 5/16" OD, 1/2" Length	20 Each	20
10	1598T41 1/2" Wide X 16' Long Aluminum Tape for, Embossing Label Printer	6 Each	6

Expected to ship

6	21205A25 Class Z Go/No-Go Plug Gauge Assembly, .407" to .5005" Range	1 Each	1 to ship by 02/10
---	--	-----------	--------------------